PAGE

*S. K. M. Basha and G. R. Rao, Effect of phosphorus and potassium deficiency on keto acid and amino acid content of peanut (*Arachis hypogaea* L.) leaves 159

F. F. Bebawi, Response of sorghum cultivars and striga population to nitrogen fertilization 261

J. H. Bouton, J. K. Syers and M. E. Sumner, Alfalfa, *Medicago sativa* L., in highly weathered, acid soils. I. Effect of lime and P application on yield and acetylene reduction (N_2-fixation) of young plants 455

M. Chand, N. S. Randhawa and D. R. Bhumbla, Effectiveness of zinc chelates in zinc nutrition of greenhouse rice crop in a saline-sodic soil 217

P. B. B. N. Charyulu, D. N. Nayak and V. R. Rao, $^{15}N_2$-incorporation by rhizosphere soil. Influence of rice variety, organic matter and combined nitrogen 399

S. K. Chatterjee and B. Nandi, Biodegradation of wheat stubbles by soil micro-organisms and role of the products on soil fertility 381

P. Cornillon and P. Dauple, Influence of irrigation rhythm and water supply on growth, water status and yield of egg-plant (*Solanum melongena* L.) 365

P. S. Cornish, Resistance to water flow in the intra-coleoptile internode of wheat 119

*H. Darmency, Some effects of herbicide-selection on *Alopecurus myosuroïdes* Huds 491

D. G. Edwards, B. T. Kang and S. K. A. Danso, Differential response of six cowpea (*Vigna unguiculata* (L.) Walp) cultivars to liming in an ultisol 61

I. H. Elsokkary, H. A. El-Attar and M. A. Amer, Influence of phospohorus and zinc fertilizers on the uptake of P and Zn by corn plants grown in highly calcareous soils 227

*D. C. Golden, S. Sivasubramaniam, S. Sandanam and M. A. Wijedasa, Inhibitory effects of commercial potassium chloride on the nitrification rates of added ammonium sulphate in an acid red yellow podzolic soil 147

Plant and Soil 59, 505-000 (1981).
© 1981 *Martinus Nijhoff/Dr. W. Junk Publishers, The Hague. Printed in The Netherlands*

S. R. GUPTA and J. S. SINGH, The effect of plant species, weather variables and chemical composition of plant material on decomposition in a tropical grassland 99

M. HALDAR and L. N. MANDAL, Effect of phosphorus and zinc on the growth and phosphorus, zinc, copper, iron and manganese nutrition of rice 415

J. HERBAUTS and E. DE BUYL, The relation between spruce monoculture and incipient podzolisation in ochreous brown earths of the Belgian Ardennes 33

*R. H. HÖWELER, D. G. EDWARDS and C. J. ASHER, Application of the flowing solution culture techniques to studies involving mycorrhizas 179

P. G. HUNT, R. B. CAMPBELL, R. E. SOJKA and J. E. PARSONS, Flooding-induced soil and plant ethylene accumulation and water status response of field-grown tobacco 427

K. HUSS-DANELL, Clonal differences in rooting of *Alnus incana* leafy cuttings 193

K. L. IU, I. D. PULFORD and H. J. DUNCAN, Influence of waterlogging and lime or organic matter additions on the distribution of trace metals in an acid soil. I. Manganese and iron 317

K. L. IU, I. D. PULFORD and H. J. DUNCAN, Influence of waterlogging and lime or organic matter additions on the distribution of trace metals in an acid soil. II. Zinc and copper . 327

*R. A. JEFFERIES, K. WILLSON and A. D. BRADSHAW, The potential of legumes as a nitrogen source for the reclamation of derelict land 173

C. VAN KESSEL and J. P. ROSKOSKI, Nodulation and N_2-fixation by *Inga jinicuil,* a woody legume in coffee plantations. II. Effect of soil nutrients on nodulation and N_2-fixation 207

C. S. KHIND and F. N. PONNAMPERUMA, Effects of water regime on growth, yield, and nitrogen uptake of rice 287

V. KUMAR, M. SINGH and N. SINGH, Effect of sulphate, phosphate and molybdate application on quality of soybean grain 3

C. K. LABANAUSKAS, L. H. STOLZY and M. F. HANDY, Protein and free amino acids in wheat grain as affected by soil types and salinity levels in irrigation water. 299

R. LENSI et A. CHALAMET, Absorption de l'oxyde nitreux par les parties aeriennes du maïs 91

R. H. Mahapatra and V. R. Rao, Influence of hexachlorocyclohexane on the nitrogenase activity of rice rhizosphere soil . . . 473

N. Malakondaiah, N. M. Safaya and M. K. Wali, Responses of alfalfa and barley to foliar application of N and P on a coal mine spoil 441

P. E. Marshall and N. Pattullo, Mycorrhizal occurrence in willows in a northern freshwater wetland 465

P. R. Maurya and R. Lal, Effect of water table depth and tillage methods on plant-water status and yield of rice 17

P. Moutonnet et M. Brandy-Cherrier, Possibilités d'utilisation des tensiomètres pour l'automation de l'irrigation 335

A. Nuske and J. Richter, N-mineralization in lössparabrownearthes: incubation experiments 237

A. A. Orabi, A. Abdallah, H. Mashadi and A. H. Barakat, Zinc-phosphorus relationship in the nutrition of corn plants (*Zea mays* L.) grown on some calcareous soils 51

M. Perniola, D. Ferri, G. Convertini and S. Vannella, Lipid content and related fatty acid composition in fallow and cultivated soil in southern Italy 249

*D. Picard, Ph. Couchat et P. Mouronnet, Particularité du cycle nycthéméral de transpiration de la variété de riz pluvial IRAT 13, comparé à celui de Morobérékan 481

D. R. Polonenko, C. I. Mayfield and E. B. Dumbroff, Microbial responses to salt-induced osmotic stress. I. Population changes in an agricultural soil 269

*C. Ll. Powell, Inoculation of barley with efficient mycorrhizal fungi stimulates seed yield 487

J. P. Roskoski, Nodulation and N-fixation by *Inga jinicuil*, a woody legume in coffee plantations. I. Measurements of nodule biomass and field C_2H_2-reduction rates 201

*R. S. Sachan and R. B. Sharma, Calcium absorption as an index of root parameters of cucumber (*Cucumis sativus* L.) 129

*K. L. Sahrawat, Comparison of Karanjin with other nitrification inhibitors for retardation of nitrification of urea N in soil . . . 495

N. Singh and R. S. Singh, Lysis of mycelium of *Fusarium oxysporum* f. sp. *udum* in soil amended with organic matters . . 9

*R. A. Singh and H. B. Singh, Effect of row orientation and plant density on yield and quality of rainfed barley 167

*M. Singh and T. A. Singh, Free proline accumulation in maize (*Zea mays* L.) subjected to prolonged waterlogging 349

*A. K. Srivastava, D. B. Singh and B. Rai, Colony interactions and mycoparasitism between *Acremonium furcatum* and *Aspergillus* spp 353

G.-Y. Tan and W.-K. Tan, Net assimilation rate and relative nitrogen assimilation rate in relation to the dry matter production of alfalfa cultivars 185

*P. A. van den Tweel and B. Schalk, The horizontally perforated soil system: A new root observation method 163

B. N. Vyas and K. B. Mistry, Influence of clay mineral type and organic matter content on the uptake of ^{239}Pu and ^{241}Am by plants 75

M. Wainright, Assay and properties of alginate lyase and 1,3-β-glucanase in intertidal sands 83

*M. Wainwright, Enzyme activity in intertidal sands and salt-marsh soils 357

S. Wanasuria, S. K. de Datta and K. Mengel, Rice yield in relation to electro-ultrafiltration extractable soil potassium . . 23

*C. Ward, R. H. Marrs and A. D. Bradshaw, Retention of nutrients by the different wastes produced by the kaolin mining industry in Cornwall 153

*I. Watanabe, M. R. de Guzman and D. A. Cabrera, The effect of nitrogen fertilizer on N_2-fixation in the paddy field measured by in situ acetylene reduction assay 135

I. Watanabe, D. Cabrera and W. L. Barraquio, Contribution of basal portion of shoot to N_2-fixation associated with wetland rice 391

C. S. Weeraratna, Effect of submergence on subsequent nitrification in a wetland cultivated rice soil 407

*N. Wilaipon, R. L. Aitken and J. D. Hughes, The use of apical tissue analysis to determine the phosphorus status of *Stylosanthes hamata* cv. Verano 141

Instructions to Authors — 1981 499

*Short Communication